NINTH SEMI-ANNUAL

REPORT

OF THE

BOARD OF WATER COMMISSIONERS,

TO THE

MAYOR AND COMMON COUNCIL

OF

JERSEY CITY,

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WITH ACCOMPANYING DOCUMENTS.

PRESENTED JULY 20, 1858.

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~~Water Survey~~.

COMMISSIONERS' REPORT.

WATER COMMISSIONERS' OFFICE,
JERSEY CITY, July 19th, 1858.

TO THE MAYOR AND COMMON COUNCIL OF JERSEY CITY:

The Water Commissioners of Jersey City, in pursuance of an act of the Legislature, passed twenty-fifth day of March, 1852, herewith submit their Ninth Semi-Annual Report of the present condition of the works under heir charge, with the accompanying documents, showing all the receipts and expenditures on account of the same.

The Report of the Superintendent and Engineer submitted and annexed hereto, is a condensed statement of the working of the Engine, the amount of water it has pumped during the past year, and the amount it is capable of supplying. His report also shows the condition of the two Reservoirs and of the pipes connected therewith, by which it will be seen that the entire works were never in a better or more satisfactory condition, and the cost for repairing and keeping in good order the water-pipes, was never so small for any similar previous period.

The balance sheet of the Registrar is a correct exhibit of the books in the Commissioners' department, showing the receipts of all monies, from every source, and the disbursements of the same, from the commencement of the works up to July 1st, 1858, as well as during the last fiscal year, together with an anticipated estimate of receipts and expenditures for the present year. The revenue from the works for the year 1858, in the opinion of your Commissioners, will be amply sufficient to defray all the necessary expenses for its proper management, without the levying of the ordinary surface tax, by the Common Council, of fifty cents per lot on all and every lot within the corporate limits of our city, as heretofore, of which your honorable body has already been advised, thus relieving our citizens from the payment of a tax they have always freely and promptly met.

The contract entered into by our Board of Commissioners with the Hoboken Water Commissioners, in the month of August last, to supply the city of Hoboken with water from our reservoir, has been renewed, and the time for laying down and completing their works for introducing water into said city, has been extended to the first day of September next, at which time the connection is to be made and the water introduced. This delay, or non-fulfilment of the first contract requiring this to be done at a much earlier time on the part of the Hoboken Commissioners, was caused by the filing and serving of a legal process upon their Board of Commissioners by the Mayor and Common Council of Hoboken, thereby preventing them from progressing with the work until an argument was had before the Supreme Court of our State, when the injunction was dissolved and the Commissioners sustained, and their acts declared to be legal and proper. Since this decision, the Commissioners from the city of Hoboken have been left to proceed with the prosecution of the work without further hindrance, and they are now busily engaged in laying their distributing pipes through the streets of their city, which they hope to have completed by the first of September next. This contract, when consummated, will give to the Jersey City Commissioners an annual increase of revenue amounting to $12,000.

Our contract with the Hudson City Water Commissioners, entered into during the year past, to supply them also with water, has not been entirely performed on their part, notwithstanding the Hudson City Commissioners immediately proceeded with their work, and laid down a large amount of pipe, and at considerable expense. They, likewise, were enjoined by the Mayor and Common Council of the City of Hudson from further continuing the work, and it yet remains to be seen whether their Commissioners will be allowed to proceed and finally consummate their contract with us. Should they be permitted to do so, our revenue will be still further increased.

The Commissioners have been much occupied during the past year, in connection with their other ordinary duties as Commissioners, in constructing the following four sewers, viz: In South 3d Street, from Provost to Monmouth Streets, which sewer is completed, and the assessment nearly ready; in Railroad and Newark Avenues and vicinity, from Washington to South Seventh Street; in South 5th Street, from Prospect to Brunswick Street; in Grand Street, from Van Vorst to Grove Street, with their laterals, receiving-basins, culverts, &c., which, when all completed, will give an aggregate of 11,684 feet of main sewers, 22,507 feet of laterals, 1,675 feet of culverts, and 93 receiving-basins, at a cost of about $93,000 for the four above named sewers.

In conclusion, the Commissioners take great pleasure in being able to present the affairs of the Board in so prosperous a condition—the financial affairs have never been more so. The revenue is increased, and our citizens relieved in part from the burden they have borne so willingly, and this, too, during a year of unparallelled commercial disaster. And your Commissioners cannot refrain from congratulating the citizens of Jersey City upon the existence of so successful an institution in the midst of this flourishing and constantly increasing city.

CHARLES FINK,
H. M. TRAPHAGEN,
LOUIS B. COBB,
E. RANDALL,
J. V. THURSTON.

SUPERINTENDENT AND ENGINEER'S REPORT.

OFFICE OF SUPERINTENDENT AND ENGINEER,
JERSEY CITY, July 1st, 1858.

To the Board of Water Commissioners of Jersey City:

GENTLEMEN:—

The following Report, showing the present condition of these works and their operation during the past year, is respectfully submitted.

The annexed table, marked A, shows the quantity of water pumped and consumed since the 1st of July, 1857. From this it appears that the engine has worked 4,047 hours and 55 minutes, delivering into the Receiving Reservoir in that time, 516,348,790 gallons of water, being an excess of 19,287,230 gallons over the quantity pumped during the previous year.

The Engine has worked with its usual economy, and is in excellent condition. A small amount of money has been expended in alterations, which have amply repaid such outlay, and rendered the engine more perfect and efficient. Until recently, the water for supplying the condenser was taken from the pumping main, after the expenditure of power nearly sufficient to deliver it into the Reservoir. The consequence was, the loss of from five to six per cent. of the whole capacity of the pump for this purpose. In the month of January, a small lifting pump was attached to the main pump, and delivers the water into the cistern of the condenser. Thus, by the expenditure of power necessary to raise the water for condensing, fifteen feet at the utmost, instead of one hundred and sixty, we have the whole capacity of the pump (diminished only by the leakage of the valves,) delivered into the reservoir.

In arriving at the quantity of water discharged in the reservoir, previous to January first, ten per cent has been deducted from the capacity of the pump, and since that time it has been diminished to four per cent. This is more than sufficient to cover the loss by leakage, at the present time, as the pump-valves are very tight, and it is, no doubt, more than the average loss.

The substitution of an india rubber valve in the air-pump bucket, in place of the heavy iron valve before used, allows the engine to work with less noise, and is a tighter valve. These improvements, and the repacking of the steam piston, during the past month, have put the engine in better working condition than ever before.

The main floor of the Engine House has become so much decayed that it will soon become necessary to renew it. The vapor and heat from the condenser have completely destroyed the beams and floor-plank, so that in many places it is too weak to support any weight upon it. The new floor should be of something more substantial than wood.

Occasional leaks have occurred, during the year, in the pumping main, in consequence of the lead being forced out of the joints. Such will always be the case, so long as the pipe is subject to the strain and shock incidental to the present arrangement.

In former reports to your Board, reference has been made to this subject, and the necessity urged, of adopting some means for securing that part of the work against the chances of accident.

We have passed through another year without accident, and may continue to do so; but it would be difficult to say how near their ultimate strength the constant strains and shocks have already tested the pipes. Like the repeated blows of a hammer in quick succession, the heavy surges of the water on its recoil, continue to act on the fibres of the iron and may ultimately tear it apart.

Both Reservoirs are in good condition. The brick work of the receiving reservoir needs repointing in some places, but generally it is but little affected by exposure to frost and the action of water.

At the Distributing Reservoir, the rough bridge from the bank to the screen tower, designed only for temporary use, should be removed, and a more substantial one, in keeping with the place, and ornamental in appearance, substituted. No opportunity has been had for cleaning out either of the reservoirs since the works have been in operation, from the necessity of always keeping a large supply of water in them, to provide against accident. The receiving reservoir is much in need of a thorough cleaning.

The pipe work between the two reservoirs has given no trouble; but one leak having occurred during the past year, and that at the bridge.

Two or three times during the spring, the fender outside of the pipe-box, at the Hackensack river, was run into by vessels passing, and broken. It is well to consider whether some additional protection to the pipe across the river, is not necessary, since it will always be subject to such accidents; and any serious accident to the pipe, such as may possibly occur, would cause a great loss of water, and much trouble and expense to repair.

In the month of April, a considerable quantity of covering over the pipes on the marsh, was burnt off, in some places so much as to uncover the pipe. It is probably cheaper to repair such losses, from year to year, as they occur, than to incur the expense of hauling material from the upland to cover them. A portion of the bank burnt off, was originally covered with upland material, but it had gradually washed off and mixed with the marsh material, so that it offered but little protection against fire.

Table B, hereto annexed, shows the amount of pipe laid during the past year, of which the total of all sizes is 7,117 feet, 6,469 feet being of cement, 6 and 12 inches in diameter; and 648 feet of iron, 3 inches in diameter. The latter was laid on the piers for supplying shipping. The cement pipe continues to answer well, and gives satisfaction.

But few leaks have occurred in the pipes in the city, and most of them were small and easily repaired.

Nearly all of the water metres in use for three years past, of which upwards of forty have been applied to the various manufacturing establishments, have been removed, having given considerable trouble by leaking, and many of them were literally "fixtures," having ceased to measure at all, after being in use a short time. There are now two metres on trial, of different construction, one the invention of H. R. Worthington, of New York, and the other of Scotch make.* Both are working very satisfactorily, requiring no repairs or attention, and are believed to be accurate measurers. The cost of either of them is much less than those formerly used.

Table A contains a statement of the quantity of water consumed in the city for each month, and the daily average for the past year.

From this it will be seen that the average daily consumption for the whole year, has been 1,426,884 gallons, and for the month of June has reached 1,700,000 gallons. The increased consumption during that and the previous month, was owing to the great quantity used in flushing out the pipes in the city. The average for the whole year, however, amounts to nearly 60 gallons for each individual of a population of 25,000. This is a quantity entirely beyond the wants of such a population, and indicates an enormous waste, which can only be checked by a strict watchfulness, and the enforcement of the most stringent rules.

The actual discharge of the 20 inch pipe between the two reservoirs, is found not much to exceed 2,000,000 gallons in 24 hours, which falls

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* Since preparing this Report, the Scotch meter mentioned above, has ceased to operate, and has been removed. Worthington's meter is still in operation and working well.

short of that deduced from the formula about 500,000 gallons.* Assuming the consumption in the city, during the coming year, to be the same as the average of the past, by the addition of Hoboken and Hudson, the quantity daily required for the supply of the three places will not be much less than 2,000,000 gallons.

The probability is, therefore, that by the end of another year, nearly the whole capacity of the pipe will be constantly required for the supply.

With such a consumption, it will be found exceedingly difficult to keep our reservoirs full, (which is the only safety with a single engine,) if any accident or necessary repairs should require the engine to be stopped for any length of time.

The consumption may be reduced below that indicated above, and the laying of another pipe deferred for some time, but as the means of insuring a certain supply, and to guard against every contingency, the erection of another engine should not longer be delayed.

During the past year, four sewers have been commenced, viz: In South 3d street, from Provost to Monmouth street, a distance of 2,784 feet. Connected with this, there are 5,007 feet of lateral sewers, 434 feet of culverts, and 23 receiving-basins. This sewer is completed, and the assessment nearly ready. There are in progress at the present time, sewers in Railroad Avenue, and Newark Avenue and vicinity, of which 3,500 feet of main sewer, 4983 feet of lateral sewers, 317 feet of culverts, and 21 receiving basins have been built. Another main sewer is being constructed in South 5th street, of which about 1,000 feet has been built. The Essex street sewer, a portion of which was built three years since, is being continued through Van Vorst and Grand streets as far Grove street. About 1,000 feet of this sewer is now built.

Of the sewers already built, 5,587 feet in Railroad avenue, Newark avenue and vicinity, and the whole of that in Van Vorst and Grand sts., 1,000 feet, were built on piles. The amount of sewers previously built, is 1,740 feet of main sewer, 1,756 feet of laterals, 360 feet of culverts, and 12 receiving basins, making the whole amount built up to the present time, 10,024 feet of main sewer, 11,746 feet of laterals, 1,111 feet of culverts, and 56 receiving-basins.

No provision has yet been made for flushing these sewers, except in the case of the Essex street sewer, which is flushed from the Morris Canal.

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* A recent examination of the pipe crossing the Hackensack river, and the 26 inch main from the Distributing Reservoir to the City, shows the formation of accretions to a considerable extent, on the interior surface of the pipe, so much as to have reduced the capacity of the pipe at least ~~pipe~~ 10 per cent.

For that reason, and to allow of the sewers being cleaned out, and for convenience of examination, they have been built larger than contemplated by the sewerage plan, being 3 feet 6 inches high and 3 feet wide, instead of three feet in diameter, excepting the Essex street sewer, which is of the latter dimensions.

Without some means of flushing the sewers, it is evident that they will soon accumulate considerable deposit. In the case of the 3d street sewer, a gate has been attached to the outlet, which is intended to act to prevent the entrance of the tide water into the sewer, except at such times as it is desirable to flush it out, when the water will be allowed to enter and be retained in the sewer, and discharged at low-water.

What power such a quantity of water may have in removing deposit remains to be seen.

It has been adopted in the absence of any other means for that purpose, and will soon be tested. In the end of each of the lateral sewers, a pipe has been inserted and brought up to the surface of the street, and covered with an iron cap, so that the water from the hydrants, when they are blown off, can be turned into the sewers instead of being thrown into the gutters. The whole success of this plan of sewerage, depends on an abundant supply of water for flushing, and the preventing the entrance into the sewers of anything which, from its nature, would be likely to obstruct the free flow of water in them.

For the accomplishment of this purpose, such a supply of water should be furnished either by the construction of the proposed canal, or some temporary arrangement answering the same end; and the manner of making connections of the house drains, should be a subject of especial attention. Such connections should be under the supervision of some competent person, specially appointed by your Board for that purpose, whose duty it should be not merely to examine the connection with the sewer in the street, but to supervise the construction of all drains from houses and lots, and see that they are in conformity with such rules and regulations as the security and efficiency of the sewers may seem to require.

In order further to secure the proper performance of such work, it should only be done by persons licensed and under suitable bonds.

All of which is respectfully submitted.

G. H. BAILEY,

Superintendent and Engineer.

TABLE A.

SHOWING QUANTITY OF WATER PUMPED AND CONSUMED FROM JULY 1st, 1857, TO JULY 1st, 1858.

WORK OF ENGINE.							CONSUMPTION OF WATER.				
YEAR.	MONTH.	Time Worked. H'RS. MIN.	STROKES.	GALLONS OF WATER. (231 cb. in)	LBS. COAL.	LBS. COAL FOR KEEPING FIRES.	Hight of Water in Dist. Res'v. above High Water.	RISE & FALL OF RESREVOIR IN GALLONS.	MONTHLY CONSUMPTION IN GALLONS.	ACTUAL CONSUMPTION PER DAY.	REMARKS.
1857.	July.....	374 15	97,340	46,758,564	110,100	12,200	125 10½	† 2,156,612	44,601,952	1,438,773	10 per cent. deducted.
"	August....	344 15	91,905	44,147,789	104,700	10,000	124 00	– 6,376,951	50,524,740	1,629,827	" "
"	September.	344 00	88,883	42,695,848	100,000	10,000	123 11	– ,285,090	42,980,938	1,432,698	" "
"	October...	418 30	106,477	51,146,743	119,200	8,700	126 11½	† 10,574,454	40,572,289	1,308,783	" "
"	November.	289 05	69,189	32,425,857	87,900	5,400	126 00½	– 3,214,906	35,640,763	1,188,025	" "
"	December.	306 00	74,054	35,572,579	87,700	6,800	124 6	– 5,343,572	40,916,151	1,319,876	" "
1858.	January...	347 00	87,622	44,886,419	98,200	8,800	126 8	† 7,833,663	37,052,756	1,195,219	4 per cent. "
"	February..	266 55	70,490	36,118,195	76,000	11,600	125 3½	– 3,639,119	39,757,314	1,282,494	" "
"	March....	369 10	102,400	52,468,482	106,400	10,800	125 10	† 1,878,348	50,590,134	1,631,939	" "
"	April.....	269 30	72,504	37,140,145	96,400	11,300	124 10	– 3,454,340	40,594,485	1,309,499	" "
"	May.....	382 00	98,648	50,546,000	119,500	12,200	124 5	– 1,441,550	51,987,550	1,677,018	" "
"	June.....	310 15	82,835	42,442,169	92,300	9,200	121 10	– 8,811,635	51,253,804	1,708,460	" "
		4047 55	1,042,347	516,348,790	1,198,400	116,200			Daily Avr'g.	1,426,884	

NOTE.—The sign † before the quantities in the ninth column, indicates the rise of Reservoir.
The sign – before the quantities in the ninth column, indicates the fall of Reservoir.

TABLE B.

STATEMENT OF PIPE WORK CONNECTED WITH JERSEY CITY WATER WORKS.

PIPES.	36 in.	26 in.	24 in.	20 in.	16 in.	12 in.	6 in.	4 in.	3 in.	TOTAL
	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.	Feet	Feet	Feet.
Previous to July, 1857	2,546	3,420	96	38,472	1,411	13,876	72,148	7741		139410
Since July, 1857... .						541	5,928		648	7117
Totals.....	2,546	3,420	96	38,472	1,411	14,417	78,076	7741	648	146527

27 miles 3,967 feet.

STOPCOCKS.	36 in.	26 in	24 in.	20 in.	16 in	12 in	6 in.	4 in.	3 in.	HYDRANTS.
Previous to July, 1857	2	2	0	13	3	22	103	7		199
Since July, 1857.....							9	1	2	17
Totals.....	2	2	0	13	3	22	112	8	2	216

Three Private Hydrants in all 219.

ESTIMATE OF RECEIPTS AND EXPENDITURES FOR THE YEAR 1858–1859.

ESTIMATED RECEIPTS.

Water Rents of 1857–58, returned to the Common Council April 1st, 1858, Amount Unpaid July 1st, 1858, and Interest...		6,042 76
Water Rents 1858–59.....		37,500 00
Measured Water Bills 1858–59.....		5,000 00
Measured " 1857–58, Unpaid.....		2,189 35
Ice Contract		2,250 0
Steamboats and Shipping, exclusive of Cunard Steamers.....		1,750 00
New Buildings and Extension of Pipe..... .		1,500 00
Hoboken Contract, Sept. 1, 1858.....	6,000 00	
March 1, 1859.....	6,000 00	
		12,000 00
		$68,232 11

ESTIMATED EXPENDITURES.

Interest.....	43,500 00
Extension of Pipe to Hoboken, and in Jersey City.....	6,375 00
Management and Repairs of Pipe Work.....	3,000 00
Engineers and Firemen's Wages and Labor.....	4,000 00
Repairs and Improvements at Engine House and Reservoirs.....	1,075 11
Fuel and cartlng same—1000 tons coal.....	6,000 00
Salaries of Engineer, Registrar and Messenger.....	3,682 00
Office Expenses and Incidental Expenses.....	600 00
	$68,232 11

STATEMENT SHOWING THE RECEIPTS AND EXPENDITURES ON ACCOUNT OF THE JERSEY CITY WATER WORKS, FROM JULY 1ST, 1857 TO JULY 1ST, 1858.

RECEIPTS.

To Balance on hand, as per Statement July 1st, 1857		$31,777 48
To Water rents, regular rates 1857, 1858, including part of Arrears of 1856, 1857, 1858, and part of 1858–1859	$35,176 06	
To Water Rents received from Cunard Steamers	1,375 00	
To " " Jersey City Ferry Co.	1,000 00	
To " " Steamboats and Tugs	240 07	
To " " Measured Water for Factories, Locomotives, &c	9,753 63	
		47,544 81
To Penalties on Non-Payment of Water Rents of 1856–1857—1857 and 1858		1,211 86
To Interest Penalties on Non-Payment of Water Rents of 1856, 1857—1857–1858		323 75
To Permits issued for Tapping Service Pipes		140 92
To Receipts from Shipping other than Steamboats		848 73
To " Ice Contract, (Passaic Ice Co.)		919 59
To " Street Sprinkling		4 00
To " Essex Street Sewer		493 36
To " Sewerage Account		53 40
To " Surface Tax 1857–1858		4,463 50
To Bills Payable on account of Sewers Building		40,047 53
To Receipts from Advertising Arrears of Water Rents		65 95
To Suspense Account		84 26
Total		$127,979 05

EXPENDITURES.

By Interest Account	$42,956 65	
By Interest on account of Advances on Sewers	1.047 53	
		$44,004 18
By Management and Repairs, viz:		
Repairs and Additions to Pumping Engine	1,243 59	
Repairs and Improvements at Engine House	217 84	
Repairs and Improvements at Bergen Hill Reservoir	194 81	
Repairs and Management of Stop-Cocks and Hydrants	386 60	
Fuel Account for Pumping Engine	315 75	
Oil " "	324 56	
Pipe Repairs	978 02	
Pipe Yard Account, for Tools, &c	44 84	
Engineer's and Firemen's Wages	2,309 03	
		6,015 04
By Extension Pipe Account, viz:		
Extension of Iron Pipe	364 78	
Extension of Cement Pipe	5,834 56	
Extension of Pipe Laying	241 75	
		6,441 09
By Extension Stop-Cocks and Hydrants		483 04
By Water Meter Account		13 04
By Horse and Wagon Account—Repairs and additions	112 13	
By " " Feed Account	88 32	
		200 45
Amount carried forward		$57,156 84

Amount brought forward		$57,156 84
By Salary Account—Engineer and Superintendent, Registrar and Messenger		3,724 39
By Tax Account		20 60
By Incidental Expense Account		312 34
By Office Expenses—Books Stationery, &c., Rent of Offices		363 57
By Corporation of Jersey City		1,686 17
By Jersey City Ferry Co		50 00
By Sewer Account—Payments on Sewers now building		40,292 11
By Balance, viz:		
In Mechanics and Traders' Bank, Jersey City	22,552 78	
In Hudson County Bank	4 11	
In Mechanics and Traders' Bank, Jersey City—Registrar's Bank Account	21 40	
In Superintendent and Engineer's hands, to Pay Bills	147 11	
Cash on hand this day, June 30th, 1858	1,647 63	
		24,373 03
Total		$127,979 05

ROBT. C. BACOT, Registrar.

JERSEY CITY, July 1st, 1858.

STATEMENT OF RECEIPTS AND EXPENDITURES ON ACCOUNT OF THE JERSEY CITY WATER WORKS, FROM THE COMMENCEMENT JULY 1ST, 1852 TO JULY 1ST, 1858.

RECEIPTS.

1858.			
June 30.	To Amount received from Sale of 725 J. C. Water Bonds	$725,000 00	
	To Premiums received on same	17,664 70	$742,664 70
	To Amount Collected by Corporation of Jersey City as Deficiency Tax	18,600 00	
	To Amount Collected by Corporation of Jersey City as Surface tax, 1854–1855	6,114 26	
	To Amount Collected by Corporation of Jersey City as Surface Tax, 1855–1856	6,319 52	
	To Amount collected by Corporation of Jersey City as Surface tax, 1856–57	4,623 01	
	To Amount collected by Corporation of Jersey City as Surface Tax, 1857–58	4,463 50	40,120 29
	To Water Rents for 2-3 of a year, from Sept. 1st, 1854, to May 1st, 1855	21,125 04	
	To Water Rents for year, from May 1, '55 to May 1, '56	39,632 58	
	To " " May 1, '56 to May 1, '57	41,213 80	
	To " " May 1, '57 to May 1, '58	41,776 53	
	To " " May 1, '58 to July 1, '58	21,524 57	165,272 52
	To Penalties received on Water Rents, 1854–55	599 02	
	To " " " 1855–56	1,210 41	
	To " " " 1856–57	1,251 55	
	To " " " 1857–58	809 19	3,870 17
	Amount carried forward		$951,927 68

Amount brought forward		$951,927 63
To Interest Penalties on Water Rents, 1855–56	555 44	
To " " " 1856–57	305 50	
To " " " 1857–58	108 28	
		969 22
To Amount Received for Permits Issued for Service Pipes		317 34
To Amount Received for Advertising Arrears, 1856–57		101 95
To Amount from Street Sprinkling		8 58
To Amount from Ice Contract		4,501 43
To Amount at Credit of Contractor for Essex Street Sewer		218 27
To Essex Street Sewer and Tributaries		10 79
To Bills Payable on account of Sewers in Wayne st., South 3d st. and South 5th st		40,047 53
To Amount received from Shipping, exclusive of Steamboats		1,984 23
To Suspense Account		88 78
Total		$1,000,175 80

EXPENDITURES.

1858.

June 30. By Construction Account, viz:

Preliminary Examination and Expenses	$2,181 67	
Commission Account	2,102 50	
Office Expenses	2,207 26	
Commissioners' Salaries. Messrs. J. D. Ward, D. S. Gregory, S. D. Harrison, M. B. Bramhall, F. B. Betts, T. A. Alexander.	7,875 00	
Engineering Department	19,763 24	
Land Account	38,539 00	
Bergen Hill Reservoir	53,331 44	
Belleville Reservoir	35,976 63	
Crane, on Wharf at Belleville	264 75	
Engine House at Passaic River	88.347 11	
Pumping Engine	37,323 07	
Engineers and Firemen's Dwellings	3,987 10	
Hackensack Bridge for Pipe	9,459 94	
Pipe Box at Bridge	7,576 74	
Syphon at Bridge	1,738 40	
Stop Cocks and Hydrants	8,544 92	
Hydrant Boxes, and Setting Hydrants	1,629 10	
Pipe Account—Iron	227,003 08	
Pipe Account—Cement	3,177 78	
Pipe Laying Account	87,586 72	
Pipe Yard Account	6,529 58	
Labor in Pipe Yard	6,360 61	
Incidental Expenses	1,490 09	
		652,995 73
By Interest Account		187,767 83
By Expenses Celebration of Introduction of Water into Jersey City		2,414 55
Amount carried forward		$843,178 16

Amount brought forward		$843,178 16
By Water Meter Account		2,271 92
By Fuel Account for Pumping Engine		14,536 92
By Oil " " "		1,568 43
By Repairs and Additions to Pumping Engine		2,905 84
By " " at Engine House		311 80
By " " at Passaic River		241 91
By Repairs and Improvements at Bergen Reservoir		474 82
By Extension (Iron) Pipe Account		17,728 00
By " (Cement) "		9,280 23
By " Pipe Laying "		5,566 14
By Pipe Repairs		2,422 09
By Pipe Yard Account, for Tools, &c		67 13
By Labor in Pipe Yard		18 66
By Repairs to Pipe Box at Hackensack River		93 06
By Extension of Stop-Cocks and Hydrants		1,994 48
By Extension of Hydrant Boxes and Setting Hydrants		240 75
By Engineers and Firemen's Wages		8,005 95
By Coal Shed and Fixtures at Engine House		120 55
By Horse and Wagon Account		272 13
By Horse Feed Account		312 73
By James F. Fielder & Co., for Pipe Work		6 98
By Repairs and Management Stop-Cocks and Hydrants		1,080 73
By Salary Account		12,773 24
By Office Expenses		2,630 52
By Insurance Account, (Buildings at Bergen and Belleville.)		67 50
By Cost of Water Boat and Fixtures for Supplying Shipping, Repairing and Running the same		1,846 54
By Maps and Plans		103 75
By Corporation of Jersey City		2,551 22
By Jersey City Ferry Company		96 00
By Tax Account		48 07
By Incidental Expense Account		1,986 43
By Sewerage Account		280 60
By Sewer in South Third Street and Tributaries		14,539 20
By Sewer in Wayne st., Newark av. "		24,040 93
By Sewer in South Fifth Street and "		2,051 32
By Sewer in Grand Street and "		50 34
By Sewer in South Seventh Street and "		17 50
By Culvert and Basin, corner of Grove and Montgomery Streets		20 20
By Balance in Mechanics and Trader's Bank, Jersey City, June 30, 1858	22,552 78	
By Balance in Hudson County Bank	4 11	
By Balance in Mechanics and Traders' Bank—Registrar's Bank Account	21 40	
By Balance in Engineer's hands, to Pay Bills	147 11	
By Cash on hand this day, June 30, 1858	1,647 63	
		24,373 03
Total		$1,000,175 80

ROBERT C. BACOT, Registrar.

JERSEY CITY, July 1st, 1858.

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